

REMARKS

This is a full and timely response to the outstanding final Office Action mailed June 10, 2005. Upon entry of the amendments in this response, claims 1 - 36 remain pending. In particular, Applicants have amended claims 18, 19 and 36. Reconsideration and allowance of the application and pending claims are respectfully requested.

Rejections under 35 U.S.C. § 103

The Office Action indicates that claims 1-36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Maeshima* in view of *Nishiura*. Applicants respectfully traverse the rejections.

With respect to *Maeshima*, Applicants respectfully agree with the contention of the Office Action indicating that *Maeshima* does not teach and/or suggest a controller for selectively selecting different arrays of photosensors. However, Applicants respectfully disagree with the contention that *Maeshima* teaches a controller that somehow controls coupling of an output to a first linear array when a first resolution is employed and to a second linear array when a second resolution is employed.

In this regard, *Maeshima* relates to a color imager having varying filter aperture sizes to compensate for luminance differences between colors. Specifically, *Maeshima* teaches adjusting of the various openings in order to change the imaging characteristics of the color image reading apparatus. However, outputs are always provided from the light receiving elements regardless of the size of the openings.

Moreover, *Maeshima* does not appear to be involved with the use of more than one resolution. Thus, Applicants respectfully inquire as to what portion(s) of *Maeshima* the Office Action is relying upon for the contention that *Maeshima* involves a controller for controlling outputs based on whether a first resolution or second resolution is being used. In this regard,

Applicants respectfully note that the CCD driving controller 408 discussed in the Office Action is used to perform identical operations with respect to each of the B, G and R components in FIG. 29. (See *Maeshima* at column 12, lines 54 – 59). Since all of the linear arrays of *Maeshima* are being used in an identical manner, resolution of the device is not being altered between a first resolution and a second resolution as indicated in the Office Action.

Further, Applicants respectfully disagree with the contention that *Nishiura* somehow remedies the deficiencies of *Maeshima* to render the pending claims unpatentable. In this regard, *Nishiura* generally relates to an image sensor comprising a plurality of photosensors and switches.

In particular, *Nishiura* discloses:

An image sensor for use in a solid-state facsimile transmitter includes a plurality of photosensors disposed in an array, each photosensor composed of a plurality of series-connected photodiodes; a voltage source; ***a plurality of switches for selectively applying a reverse bias from the voltage source to the photosensor array, each photosensor in the array being successively reverse biased by a corresponding one of the switches;*** and an output resistor for detecting current flowing through the selected reverse biased photosensor. The photosensors and switches may each comprise a plurality of series-connected photodiodes provided on a common substrate.

(*Nishiura* at Abstract). (Emphasis added).

Additionally, *Nishiura* discloses:

An equivalent electrical circuit diagram of an image sensor according to a preferred embodiment of the present invention is shown in FIG. 5. In the circuit, each photosensor comprises three photodiodes 30 connected in series, with the anodes of the last diode in each photosensor being connected together through respective semiconductor switches 40 so as to be selectively connected to a negative terminal of the voltage source 51 through a resistor 53. ***Switches 40 are successively turned on by a control circuit 52 to select one of photosensors 30, and the current flowing through the selected photosensor 30 is read out as a voltage drop across terminals of 54 and 55 of output resistor 53.*** A control circuit 52 suitable for driving of switches 40 may comprise a pulse sequencer or the like, and is conventional in the art.

The magnitude of current flowing through output resistor 53 is substantially proportional to the amount of light which is detected by the

selected photosensor. Therefore, the magnitude of the current reflects the brightness of that portion of a manuscript (not shown) which is positioned opposite to the selected photosensor. *The photosensors are preferably arranged in an array defined by rows and columns of photosensors in a common plane, and are scanned by sequential operation of semiconductor switches 40 to operate cumulatively as an image sensor.*

(*Nishiura* at column 3, line 55 to column 4, line 13). (Emphasis added).

Based on the above teachings, it is clear that the device of *Nishiura* sequentially selects each of the photosensors irrespective of a desired resolution. Thus, *Nishiura* does not teach the selection of one linear array instead of another because the selection of *Nishiura* is sequential and cumulative. That is, even though the arrays are selected individually, all of the arrays are selected.

Furthermore, *Nishiura* discloses:

FIG. 8 graphically shows the relationship of voltage and current of diodes 30 in which the reverse-bias state is in the second quadrant. In this state, the current through the diodes does not change substantially with voltage. Therefore, since the magnitude of the photovoltaic current does not depend on the bias applied to the photodiodes 30, the current detected is the same regardless of the number of diodes connected in series, provided at least one of the series-connected diodes is operating properly. *In other words, if one or even two of the three series connected diodes is faulty, the composite photodiode 30 will still provide the proper current level (indicative of light or dark conditions) provided at least one of the three individual diodes is still operating properly.*

(*Nishiura* at column 4, lines 45 to 59). (Emphasis added).

Clearly, even if one or more of the arrays are faulty, the switches are still operated to select all of the arrays. Thus, Applicants respectfully assert that reliance on *Nishiura* for teaching the selection of one linear array instead of another is improper. Moreover, resolution of the device of *Nishiura* is not being altered between a first resolution and a second resolution. Therefore, for at least these distinct reasons, Applicants respectfully assert that *Nishiura* is incapable of remedying the deficiencies of *Maeshima*.

In this regard, claim 1 recites:

1. A multiple resolution sensing apparatus comprising;
a plurality of first photosensor elements coupled together to form a first linear array and having a first length and a first resolution;
a plurality of second photosensor elements coupled together to form a second linear array and having a second length and a second resolution;
a coupler having an output, said coupler coupled to said first linear array and to said second linear array; and
a controller coupled to said coupler and providing a control signal to said coupler such that said output is coupled to said first linear array when said first resolution is employed and such that said output is coupled to said second linear array, instead of said first linear array, when said second resolution is employed.

(Emphasis added).

Applicants respectfully assert that the cited art, either individually or in combination, is legally deficient for the purpose of rendering claim 1 unpatentable. In particular, Applicants respectfully assert that none of the references or combinations thereof teaches or reasonably suggests at least the features/limitations emphasized above in claim 1. Therefore, Applicants respectfully assert that claim 1 is in condition for allowance.

Since claims 2 - 19 are dependent claims that incorporate all the features/limitations of claim 1, Applicants respectfully assert that these claims also are in condition for allowance. Additionally, these claims recite other features/limitations that can serve as an independent basis for patentability.

With respect to claim 20, that claim recites:

20. A method for multiple resolution sensing comprising the steps of:
actuating a first switch residing in a coupler such that a plurality of first photosensor elements in a first linear array detect an image when a first resolution is specified; and
actuating said first switch such that a plurality of second photosensor elements in a second linear array detect said image, instead of using the plurality of first photosensor elements in the first linear array, when a second resolution is specified.

(Emphasis added).

Applicants respectfully assert that the cited art, either individually or in combination, is legally deficient for the purpose of rendering claim 20 unpatentable. In particular, Applicants respectfully assert that none of the references or combinations thereof teaches or reasonably suggests at least the features/limitations emphasized above in claim 20. Therefore, Applicants respectfully assert that claim 20 is in condition for allowance.

Since claims 21 - 32 are dependent claims that incorporate all the features/limitations of claim 20, Applicants respectfully assert that these claims also are in condition for allowance. Additionally, these claims recite other features/limitations that can serve as an independent basis for patentability.

With respect to claim 33, that claim recites:

33. A system for multiple resolution sensing comprising:
means for actuating a first switch such that a plurality of first photosensor elements in a first linear array detect an image when a first resolution is specified; and
means for actuating said first switch such that a plurality of second photosensor elements in a second linear array detect said image, instead of the plurality of first photosensor elements in the first linear array, when a second resolution is specified.

(Emphasis added).

Applicants respectfully assert that the cited art, either individually or in combination, is legally deficient for the purpose of rendering claim 33 unpatentable. In particular, Applicants respectfully assert that none of the references or combinations thereof teaches or reasonably suggests at least the features/limitations emphasized above in claim 33. Therefore, Applicants respectfully assert that claim 33 is in condition for allowance.

Since claims 32 - 36 are dependent claims that incorporate all the features/limitations of claim 33, Applicants respectfully assert that these claims also are in condition for allowance. Additionally, these claims recite other features/limitations that can serve as an independent basis for patentability.

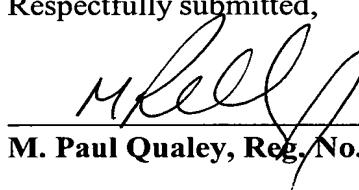
Cited Art Made of Record

The cited art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,


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